

Research Report: Impact of VLE-Moodle on the Learning Experience of the Students at the
University of Wales Trinity Saint David (UWTSD) London Campus

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Introduction

A Virtual Learning Environment (VLE) is described as a unique and integrated web-based platform in educational institutions that offers the student and the faculty with an environment to present various resources and interactive sessions that is required within a particular course structure. VLE also acts as an assessment stage and assists in content management, curriculum planning, real-time communication and various other such facilities. It also enhances the active learning skills and personality development among the students. Moodle is one such VLE that acts as a learning platform in educational and business settings.

Aim

The primary aim of the research study is to prepare a research report on the impact of VLE- Moodle on the learning experience of the students at the University of Wales Trinity Saint David (UWTSD) London campus.

Objectives

- To enhance the digital skills of the students within their work environment.
- To create awareness on the use of potent information analysis and its significance on translation to knowledge.
- To promote the learning environment skills among the students in the UWTSD.

Rationale

The recent advancement in Information and Communications Technology (ICT) has led to the change in the learning platform of the students, which indeed is found to create certain issues. With proper training on the use of this technology and providing the students with the necessary resources and learning environment, this kind of issues can be sorted.

Literature Review

The theoretical framework that supports the present study on the impact of VLE and its significance on the learning experience of the students are based on the research studies that are carried out by Zhu and Hua (2020), Silva et al (2017), Martelloni et al (2018), Mosqueira (2017), and Zierer and Wisniewski (2018).

The recent advancement of technology with the use of computers and internet facilities are found to replace the traditional classroom learning experience of the students with the modern virtual learning experience. The proficient use of technologies has led the educators and the instructors to the development of diverse curriculum design, teaching strategies, and learning possibilities for the students. VLE with its blended and open learning experience is considered as a powerful tool in the field of education across the globe. It facilitates the instructors and the students with experiences that are way far from the traditional learning experience (Zhu and Hua, 2020). The Modular Object-Oriented Dynamic Learning Environment (Moodle) is available across the globe in various universities, schools, and organizational settings. The e-learning Moodle-VLE online tool is considered to amplify and modify the already existing learning environments that are available online and it facilitates the educators and the learners with a safe, robust, and an integrated system for developing a personalized learning environment. Moodle with its user-friendly Learning Management System (LMS) is regarded as an excellent platform for all kinds of learner-centric activities (Silva et al., 2017).

Martelloni and team (2018) observed that VLE enhances the quality skills of the students and equips them with the recent digital advancements and internet usage skills for educational purposes through the virtual and the online communities. Mosqueira (2017) claims that those students who found that the use of VLE for language learning experiences

was useless were found to gain significant and better learning experience with VLE. The application has enabled the students to be more functional, convenient, and easy to use in this digital age. It was found that most of the students were found to be much encouraged with the use of VLE and was also found to be more confident in developing their skills in language learning activities (Mosqueira, 2017). Zierer and Wisniewski (2018) observed that the feedbacks received from the students who use Moodle-VLE were found to be very satisfactory. The application was found to enhance the active involvement and the learning activities among the students with its easy access and comfortable usage features.

Amidst the huge positive impact reports and advantages of the use of VLE among the students, there are also certain negative impacts that were reported among the students with the use of VLE in educational institutions. Clover (2017) reported that those students undergoing learning activities through e-learning are known to be less active than with the students who attend the traditional class room kind of studies. These students are found to lack various benefits and opportunities that are obtained through the ancient classroom activities such as the skills of interaction and live communication.

Research Methodology

The methodology employed for carrying out the study is done through the primary data and the secondary data analysis. The primary data which refers to the original data is regarded as the most authentic and the reliable data. Among the various methods that are available for collecting the primary data, the questionnaire-survey method is employed for collecting the data in this research study. Similarly, secondary data is also collected from the already existing data that are available in publications, journals, and other such credible resources (Mondal and Mondal, 2018) for analyzing the impact of VLE on the learning experience of the students.

Sample and Data Collection Tools

The instrumentation employed for primary data collection is the use of a questionnaire survey method with twelve questions. The questionnaire (Appendix A) is carried out with students of our campus by sharing them through email. Samples of 210 students were selected and the survey report was obtained to analyze the effectiveness of VLE among the students with regard to their learning experience. The questionnaire comprise of multiple-choice questions and a likert type scale that ask the participants for their opinion about the use of VLE and how it has enhanced their learning experiences was included. The major goal of the questionnaire was to gain insights from the students in the classroom to know their understanding and their ideas and opinion about the use of VLE in the campus for educational purposes. Among the participants, the percentile of males was 46.3 and females were 53.7%. The distribution of age groups is as 21-25yrs (56.7%), 19-20yrs (37.8%), 26-30yrs (3%), 31-35 (1.2%), and 36yrs (1.2%). In secondary data collection, the search strategy was employed by using the keywords such as VLE and impact of VLE on students from various library databases, journals, e-books, and various organizational websites.

Ethical Considerations

The participants involved in the study were well informed about the questionnaire and the significance of the survey. A clear consent was obtained from the students before sharing the questionnaire with them to their mail accounts.

Data Analysis and Discussion

The primary research analysis helps in understanding the effectiveness of the usage of VLE-Moodle among the students in UWTSD, London campus. The completed questionnaires were collected from the students and were revised for the presence of any inconsistencies.

The data obtained was then analyzed, graphically represented, and interpreted based on the derived results. Secondary data analysis is employed to identify the impact of VLE among various students with regard to their learning experience and to find out the possible barriers and the solutions that are involved in overcoming those hindrances.

Table 1: What does the Internet mean to you?

Factors	Percentage
Resource for learning/having fun	50
System of great benefit to humanity	35
Confusing resource spot	3
Useless and overwhelming resource	3
Familiar field	3
Unknown field	2
Others	4

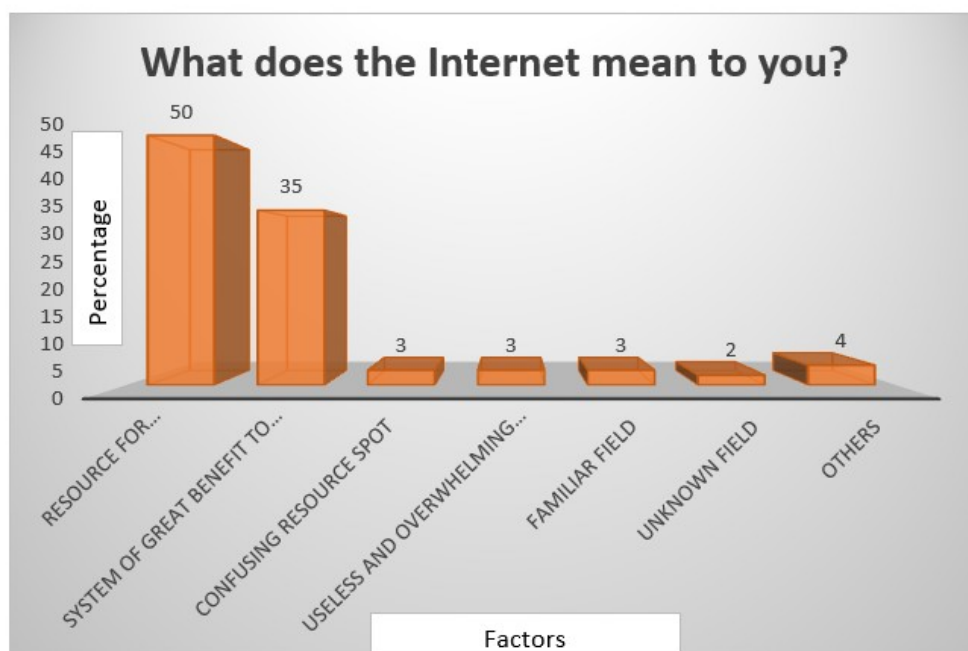


Chart 1: What does the Internet mean to you?

From the above analysis (Table 1, Chart 1) it is observed that around 50% of the participants were found to use internet for learning activities or intend to use for having fun. Around 35% were found to benefit humanity and around 3% were found to claim that the use

of internet were found to be useless and overwhelming. This evidence is supported by the study carried out by Korovina (2019) which states that the use of internet enhances the learning capabilities, cognitive, and personality development of the students.

Table 2: Rating the use of ICT Competence

Factors	Percentage
High	73
Medium	27
Low	0
Ineffective	0

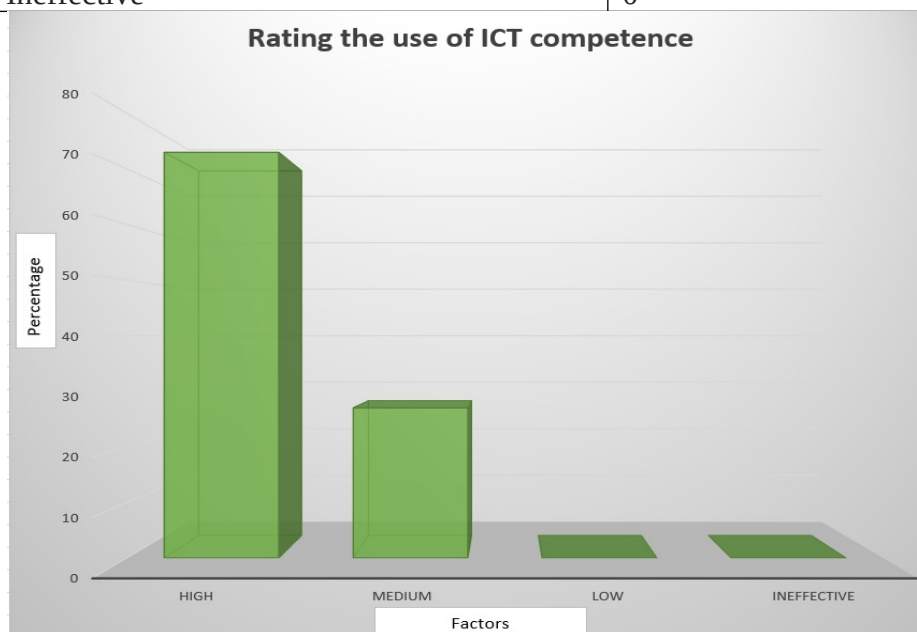


Chart 2: Rating the use of ICT competence

With regard to the use of ICT competence (Table 2, Chart 2), it is found that around 73% of the participants rated the use of computer competence as high and none of them were found to have a low or ineffective competence with regard to the use of ICT. The use of ICT are found to promote the employability of the students wherein the students are equipped with skills of creativity, decision-making, and research activities (Infante Moro et al., 2019).

Table 3: Use of VLE in learning process

Factors	Percentage
Beneficial	90
Less Impact	7
More negative Impacts	3

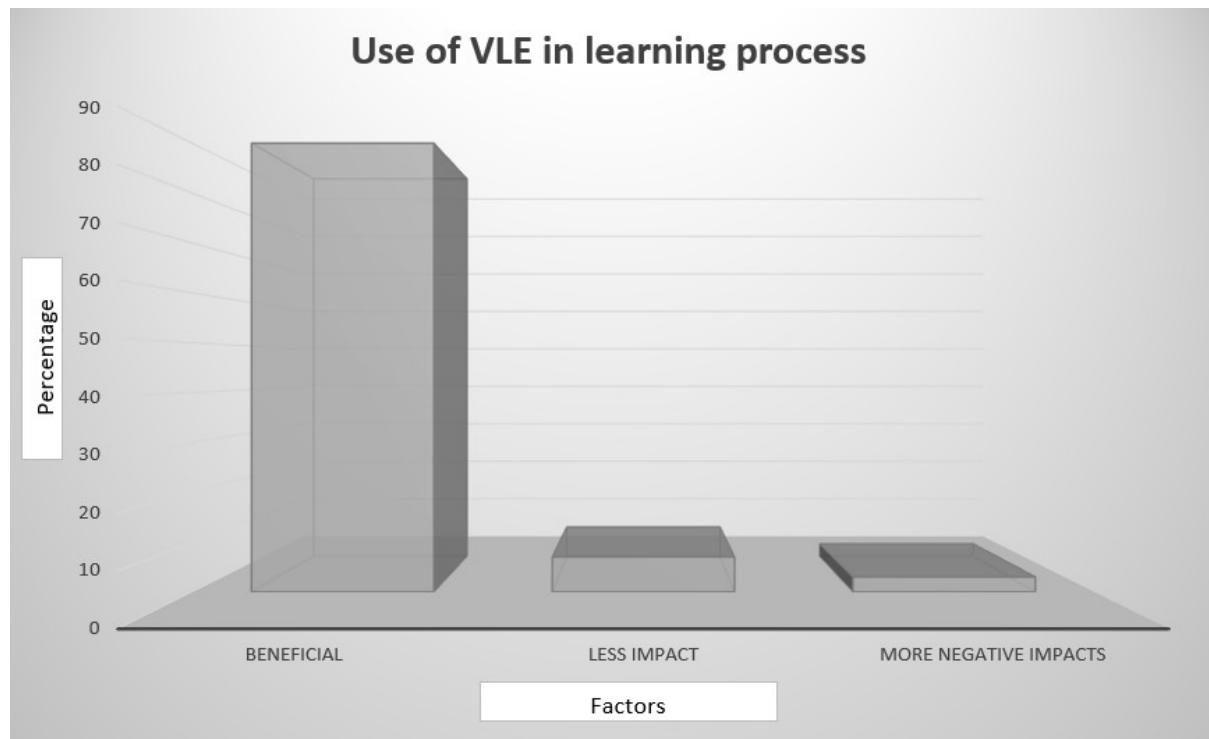


Chart 3: Use of VLE in learning process

In terms of employing VLE for learning activities in UWTSD (Table 3, Chart 3), it is observed that 90% students found VLE to be very beneficial in their learning activities whereas only 3% students reported to have negative impacts. VLE is known to create a greater impact among the active learners in educational settings (Kalaysi, 2015).

Table 4: Your Experience with VLE in Learning Process

Factors	Percentage
Faced Technical problems	30
Satisfactory	61

Less satisfactory	6
No great experience	3

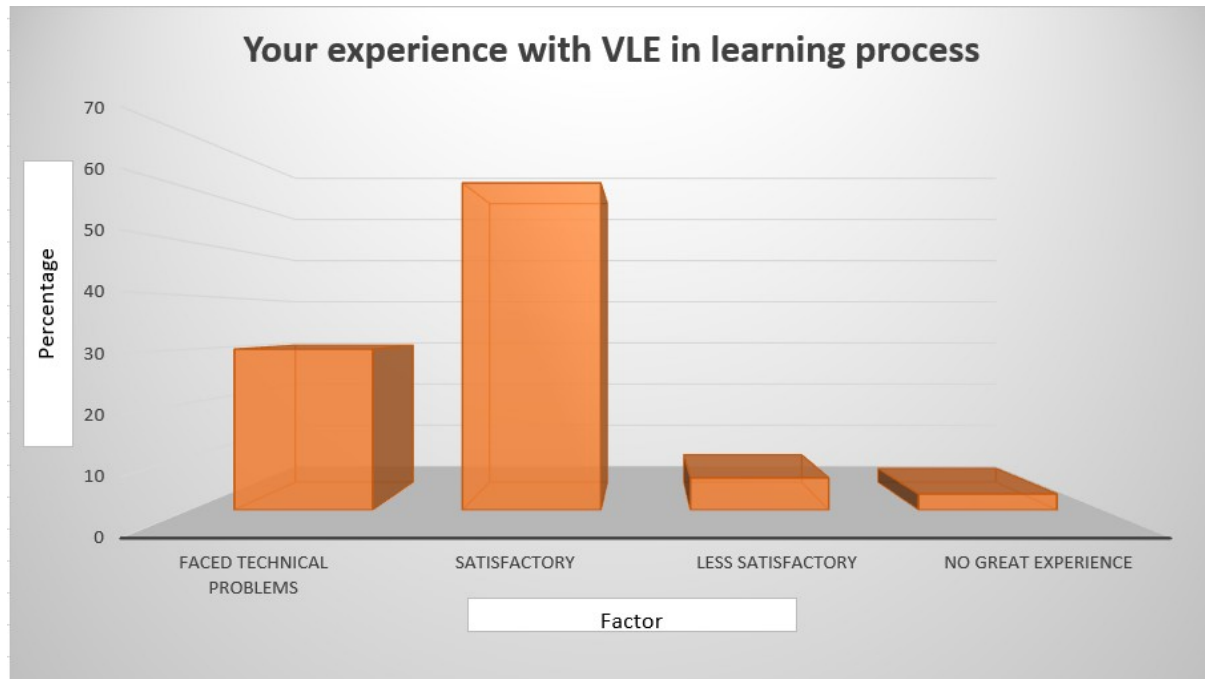
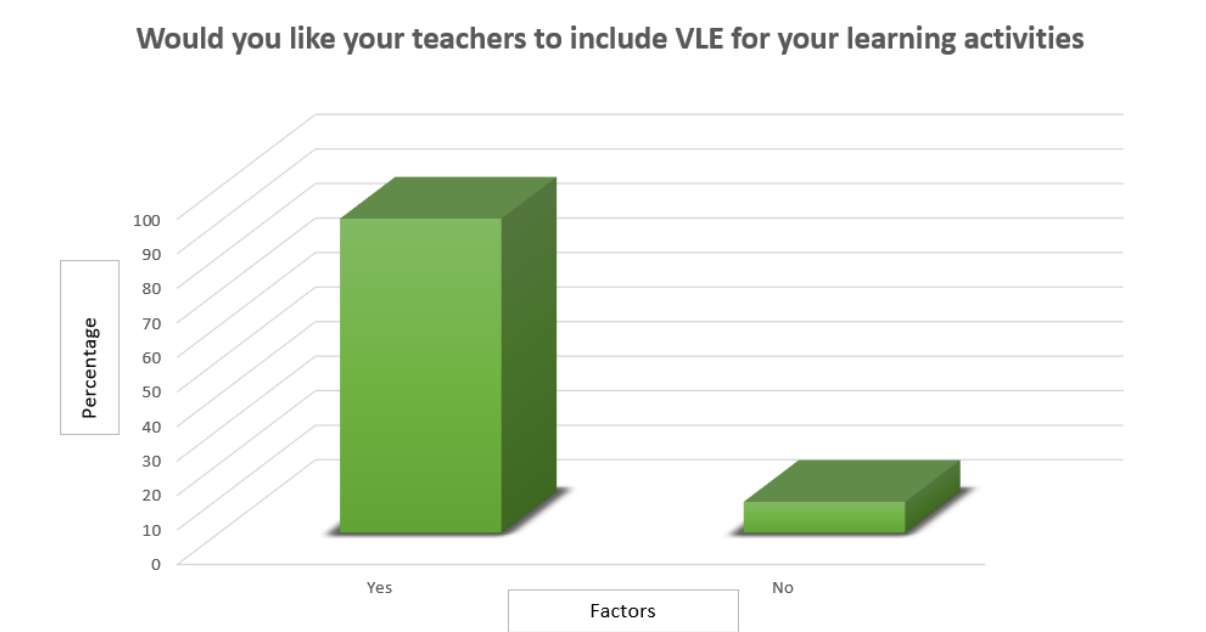


Chart 4: Your experience with VLE in learning process

The study reported that 61% students who employed VLE for their learning experience were found to have a satisfactory feeling. Around 30% were known to face technical problems with the use of the Moodle-VLE application and 6% participants reported less satisfactory response and 3% claimed that they did not experience any great feeling with the use of VLE for their learning purposes (Table 4, Chart 4). According to Gillett-Swan (2017), it is observed that even though there are various advantages with the use of VLE, at certain cases, some students find the application difficult due to certain technical problems that they encounter with. Accordingly, from the data obtained for the current study, it is observed that there are around 30% participants who encountered technical problems.

Table 5: Would you like your teachers to include VLE for your learning activities

Factors	Percentage
Yes	91
No	9

**Chart 5:** Would you like your teachers to include VLE for your learning activities

Around 91% of the students claimed to want their teachers to use VLE for their teaching purposes whereas 9% reported to have their traditional kind of classroom teaching (Table 5, Chart 5).

Table 6: Survey Analysis

Characteristics	Positive Impact (%)	No Great Impact (%)	Negative Impact (%)
Easy and Functional Activities	83.30	12.27	4.29
Lab work better than textbook	61.36	27.61	11.04
Flexibility	76.07	6.75	17.18
Triggering Motivation & Encouragement	75.46	13.49	11.04

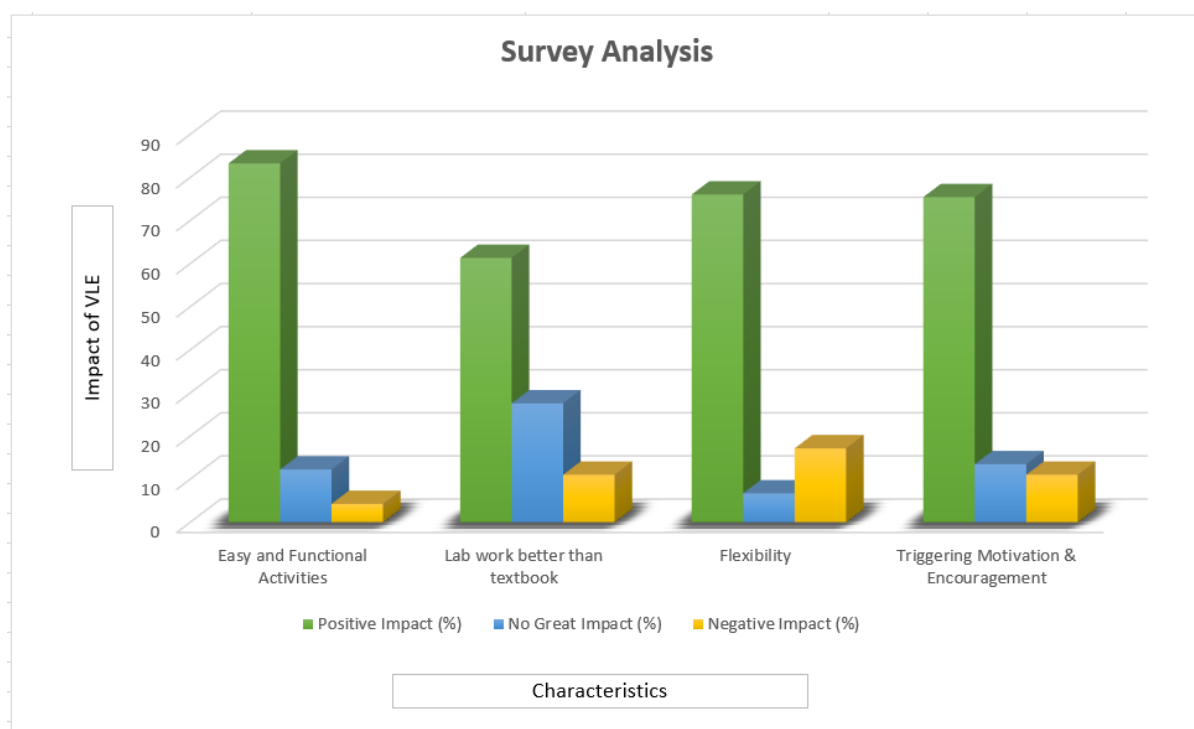


Chart 6: Survey Analysis

Based on the characteristics of the VLE-Moodle tool, it is observed that 83.30% students claimed that the use of VLE was easy with various functional activities, 61.36% participants found that the lab works were found to be more informative than that available through the textbooks, 76.07% claimed the application to be flexible wherein they could study and operate the application at any time in their own convenient place and pace. It is also observed that among the participants nearly 75.46% students after using VLE found to be more motivated and encouraged to get involved in their learning activities. Similarly, for all these characteristics only a few percentages of students reported to have a negative impact with the use of VLE-Moodle in their learning activities (Table 6, Chart 6).

Mosquera (2017) stated that the implementation of VLE in their class was found to create a positive impact on the learning experience of the student by making them feel more motivated and enthusiastic. The study conducted by Klimkiewicz (2016) showed that employing Moodle in the higher education purposes of students is known to help the students to build their social development skills through the internet technologies than by adopting them through the traditional learning practices. It is also found to enhance their commitment towards their routine responsibilities. With Moodle-VLE the communication between the educator and the students were also found to increase. It was also found that apart from the usual educational learning skills, the participated students in the research study were found to develop certain interpersonal skills that boosted their teamwork talents, critical thinking and decision-making skills Klimkiewicz (2016).

Thus from the primary and the secondary data analysis, it was observed that the use of the newest trend in the field of education namely the Moodle-VLE was found to create a positive impact in the learning skills and capabilities among the students of the UWTSD as well as in the other university students. It was also found to maximize the reflection capability of the students.

Recommendations

The evolution of VLE technologies in the future days are known to create a better environment for the modern day learners with the employment of virtual science laboratories wherein the learners are provided with the opportunities to carry out various practical experiments and studies. VLE also paves way for establishing virtual environment for humanities like the excavation sites, historic museums, and so on. Innovations on virtual corporate training are also found to be possible in the near future through which the workers

will be found capable of performing hands on training on any novel equipment and machineries.

Conclusion

VLE which is of significant importance in the field of education are known to be of great demand in the modern world. The results obtained from the study shows that VLE is found to be very beneficial to all the students in the class at the UWTSD campus. It enabled the students to use the resources according to their flexibility in terms of learning pace and time. The literature review also provides evidence that supports the impact of VLE among the students in a most positive manner.

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Appendix A: Questionnaire

1. Which semester are you in?
2. What does internet mean to you?
 - (i) Resource for learning/having fun
 - (ii) System of great benefit to humanity
 - (iii) Confusing resource spot
 - (iv) Useless and overwhelming resource
 - (v) Familiar field

- (vi) Unknown field
 - (vii) Others
3. How do you rate your ICT usage competence?
- (i) High
 - (ii) Medium
 - (iii) Low
 - (iv) Ineffective
4. Your opinion about the use of VLE in learning process
- (i) Beneficial
 - (ii) Less impact
 - (iii) Many negative impacts
5. How frequent is your Moodle usage? (Daily/Weekly/rarely/Never)
6. Your experience with VLE
- (i) Faced technical problems
 - (ii) Satisfactory
 - (iii) Less satisfactory
 - (iv) No great experience
7. Were you provided with interactive course material? (Yes/No)
8. If provided with interactive course material, which kind is it from the below?
- (i) survey
 - (ii) Quiz
 - (iii) multiple choice questions
 - (iv) game based
 - (v) journal
 - (vi) offline assignment upload

- (vii) SCORM
- (viii) self-paced learning
- (ix) none of the above

9. Have you used any of these course activities?

- (i) chat
- (ii) forum
- (iii) glossary
- (iv) wiki
- (v) workshop
- (vi) self-assessment
- (vii) video conferencing
- (viii) discussion boards
- (ix) choice poll
- (x) blogs
- (xi) never used any of the above

10. Does your course provide grade mark via Moodle (Yes/ No)

11. How effective is Moodle in your classroom?

- (i) Not at all effective
- (ii) Below moderate
- (iii) Moderately effective
- (iv) Effective
- (v) Very effective

12. Would you like your teachers to include VLE for your learning activities? (Yes/ No)

